

### **REMARKS**

The present Amendment is in response to the Office Action mailed July 30, 2007. Claim 4 remains cancelled and claims 13-14 are currently withdrawn. Claims 1 and 5-7 are amended and new claims 16-21 are added. Claims 1-3, and 5-12, and 14-21 remain pending in view of the above amendments.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

### **Examiner Interview**

Applicant thanks the Examiner for the interview conducted on December 17, 2007. This response includes the substance of the interview.

### **Rejection Under 35 U.S.C. § 102 or, in the alternative, § 103**

The Office Action rejected claims 1-3 and 5-13 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over JA 2002-032909 (*Hironao*).

The Office Action also rejected claims 1-3 and 5-13 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over US 2002/0127432 or US 2003/0164005 (*Saito*).

Applicant respectfully traverses the rejections at least for the reasons discussed herein and at the interview. As discussed at the interview, each of the independent claims include limitations related to bearing heights. Bearing heights are a good way to describe the shape of the textures that is not easily achieved with a measurement of roughness.

As discussed at the interview, the bearing height relates to the area of the textures that falls within a cut plane. As the cut plane moves to the top of the textures, the percentage of the area of the textures within the cut plane becomes smaller with respect to the total area of the measurement range.

Claim 1 describes the textures and the shape of the textures using the bearing heights. The bearing heights in claim 1 are measured from a reference bearing height, which is associated with the location where the area of the textures in a cut plane is 50% of the entire area of the measurement range.

Using this reference bearing height, the difference in texture height between where the bearing ratio is 0.01% and the bearing ratio is 0.4% can be determined. As required in claim 1, this difference is between 0.01 nm and 1.0 nm.

With this in mind and as discussed at the interview, claim 1 has been amended to clarify that the bearing height relates to the percentage of the area of the textures in the cut plane with respect to the entire area of the measurement range. In claim 1, the difference in bearing height when the bearing ratio is 0.01% and the bearing height when the bearing ratio is 0.4% is between 0.01 nm and 1.0 nm. As noted in the specification and discussed herein, the difference between the bearing heights reflects the shape of the texture.

This texture required by claim 1, however, is not taught or suggested by the cited references. In fact, the recent Office Action recognizes that the prior art does not characterize bearing ratio and bearing heights for their substrates. In order to establish the rejection, the Office Action suggested that because the prior art shows the same materials and manufacturing processes, it would have reasonably to expect to produce the same substrate or nearly so. See Office Action at page 3. In other words, the Office Action suggests that even though bearing heights and bearing ratios are not taught by the cited art, the same materials and manufacturing processes in the prior art would reasonably expect to produce the same substrate or nearly so.

Applicants respectfully disagree. As discussed at the interview, the cited references fail to disclose the same manufacturing processes. In fact, the cited art appears to teach away. As a result, it is not reasonable to expect them to produce the

same substrate or nearly so. Further, the requirements of anticipation and obviousness have not been satisfied.

For example, *Hironao* suggests that the chemically-strengthened glass substrate which performed ion exchange treatment has the high concentration of the alkali ion with which the ion exchange of the outermost surface was carried out has a possibility of the elution by aging. *Hironao* further teaches that there is a possibility that the dependability of a magnetic-recording medium may be spoiled by this chemical strengthening. See ¶[0006]. This suggests the undesirability of chemical strengthening.

In contrast, the specification discloses a chemical strengthening process. Because of this difference in manufacturing processes, it is not reasonable to expect that the materials and manufacturing processes in the prior art will produce the same results. In particular, there is no teaching or suggestion that the process of *Hironao*, which suggests that chemical strengthening treatments are undesirable, can produce the bearing heights required by claim 1. Thus, *Hironao* cannot be said to teach or suggest the claimed invention.

Similarly, *Saito* relies on a chemical etching treatment during the manufacturing process. *Saito* teaches "an initial stage of etching" where the "amount of the glass removed by etching (etching depth) is small in those surface and near-surface areas of the glass which have a permanent compression strain." See ¶[0061]. *Saito* further teaches that "the glass plane is immersed in an etchant". See ¶[0062].

Etching glass would appear to have a significant impact of the shape of the textures in contrast to the manufacturing process disclosed by the specification. Because of this difference in manufacturing processes between the specification and *Saito*, it is not reasonable to expect that the materials and manufacturing processes in the prior art will produce the same results. Thus, *Saito* cannot be said to teach or suggest the claimed invention.

In other words, the manufacturing processes described by the cited art differ from that disclosed in the specification. *Hironao* teaches away from chemical-strengthening and *Saito* relies on chemical etching. The inherency rejection set forth by the Examiner

relies on the assumption that the materials and manufacturing processes disclosed by the cited art are the same. As illustrated herein and discussed at the interview, the manufacturing processes are not the same. As a result, it is not reasonable to expect that the same substrate will be produced.

For at least these reasons, Applicant respectfully submit that the independent claims 1, 5, and 6 are in condition for allowance and are patentable over the cited art. The dependent claims are patentable for at least the same reasons.

The Office Action also suggests that *Saito* teaches 5,000-40,000 lines/mm density within the instant 10-20 nm texture lines as required by claim 2. In claim 2, 10-20 nm texture lines corresponds to a density of 50,000-100,000 lines per mm. As a result, *Saito* fails to teach or suggest the requirements of claim 2.

### **New Claims**

By this response, Applicant has added new claims 16-21. Claims 20 and 21 (and claim 12) require that the ratio ( $Hv1/Hc2$ ) of a coercive force  $Hc1$  in a circumferential direction with respect to a coercive force  $Hc2$  in a radial direction is greater than 1.1 and less than or equal to 1.3. This range is not taught or suggested by the cited art. In fact, *Hironao* discloses a range of 0.9 to 1.1. See ¶[0011]. For at least this reason, claims 12, 20 and 21 are patentable over the cited art.

New claims 16-19 have been presented to include subject matter that has been identified as allowable. In particular, new claims 16-19 include at least the subject matter associated with examples 25-29 in the specification and claim the relevant bearing height ranges identified in those examples. As indicated by the Examiner, new claims 16-19 are patentable over the cited art.

### **Conclusion**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 31<sup>st</sup> day of December, 2007.

Respectfully submitted,

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